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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/185,070 11/03/98 MEIRZON

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EXAMINER

WM02/0228

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ART UNIT

PAPER NUMBER

2684
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/185,070

Applicant(s)

Melrzon et al

Examiner

Lana Le

Group Art Unit

2684



☒ Responsive to communication(s) filed on Dec 19, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-6, 8-12, and 16-19 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-6, 8-12, and 16-19 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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Response to Amendment

Response to Arguments

1. Applicant's arguments with respect to claims 1-6, 8-12, 16 have been considered but are moot in view of the previous reference Dent et al which has a typographical error as US 5,471,655 but is US 5,991,635 as in the reference cited, and claims 17-19 have been considered but are moot in view of new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 8-12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soleimani et al (US 5,678, 228) in view of Dent et al (US5,991,635).

Regarding claim 1, Soleimani et al discloses a VSAT terminal comprising an antenna 12 (see Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the power amplifier to the antenna; a receiver 80 coupled via the microwave low noise amplifier to the antenna; a user VSAT interface 16; and a

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controller 45 in communication with the user VSAT interface and in electrical connection with the power amplifier and the low noise amplifier for supplying power thereto, a controller operative to provide a full electrical power supply to either of the amplifiers in the presence of a communication period (col 4, lines 25-35). Soleimani didn't disclose the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the user VSAT interface. However, Dent et al discloses the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the user VSAT interface (col 4, lines 18-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al to Soleimani et al in order to be able to save power when a period of inactivity is detected.

Regarding claim 2, it is rejected as set forth in claim 1, wherein Soleimani et al further presents that the controller is controlled to react when the user VSAT interface send out a signal by providing electrical power to the power amplifier (col 4, lines 15-20).

Regarding claim 3, it is rejected as set forth in claim 1, wherein Soleimani et al further discloses that the controller is controlled to react when the user VSAT interface send out a signal for providing electrical power to the low noise amplifier (col 6, lines 55-67).

Regarding claim 4, it is rejected as set forth in claim 1, wherein Soleimani et al further discloses that the controller dispenses a less than full power supply to the low noise amplifier and the microwave power amplifier when there is no communication signal (col 4, lines 63-67, col 5,

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lines 1-5) and wherein the controller is controlled to react when the user VSAT interface sends out a signal by providing a full power supply to the low noise amplifier and the power amplifier (col 4, lines 60-63, col 4, lines 20-25).

Regarding claim 7, Soleimani et al further discloses that the controller is functional to turn down the electrical power supply to either of the amplifiers after a predetermined period of inactivity by the user VSAT interface (col 4, lines 59-67).

Regarding claim 8, Soleimani et al further discloses that the controller is functional to turn down the electrical power supply to either of the amplifiers after a predetermined period of inactivity of the microwave low noise amplifier (col 5, lines 10-13).

Regarding claim 9, Soleimani et al further discloses that the controller operates in accordance with a predetermined power control scheme for providing electrical power to the microwave power amplifier (col 4, lines 42-53).

Regarding claim 10, Soleimani et al also reveals a VSAT telecommunication network 10 (Fig 1) comprising at least one satellite 4, and a plurality of VSAT terminals 6 talking with the communication satellite, wherein at least one of the VSAT terminals comprises an antenna 12 (see Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the power amplifier to the antenna; a receiver 80 coupled via the microwave low noise amplifier to the antenna; a user VSAT interface 16; and a controller 45 in communication with the user VSAT interface and in electrical connection with the power amplifier and the low noise amplifier for supplying power thereto, the controller being and

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functional to dispense a full electrical power supply to either of the amplifiers in the presence of a communication period (col 4, lines 25-35). Soleimani didn't disclose the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the user VSAT interface. However, Dent et al discloses the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the user VSAT interface (col 4, lines 18-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al to Soleimani et al in order to be able to save power when a period of inactivity is detected.

Regarding claim 11, Soleimani et al presents a method for managing power consumption in a VSAT terminal having an antenna 12 (see Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the power amplifier to the antenna; a receiver 80 coupled via the microwave low noise amplifier to the antenna; a user VSAT interface 16; and a controller 45 in communication with the user VSAT interface, the power amplifier, and the low noise amplifier, the method comprising of dispensing a full electrical power supply to either of the amplifiers in the presence of a communication period (col 4, lines 25-35). Soleimani didn't disclose the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the user VSAT interface. However, Dent et al discloses the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a

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predetermined period of inactivity of the user VSAT interface (col 4, lines 18-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al to Soleimani et al in order to be able to save power when a period of inactivity is detected.

Regarding claim 12, Soleimani et al further discloses that the method according to claim 11 wherein the step of dispensing a less than full electrical power supply comprises dispensing a less than full power supply to the microwave low noise amplifier and the microwave power amplifier when there is no communication present (col 4, lines 63-67 and col 5, lines 1-5) and wherein the dispensing a full electrical power supply step comprises providing a full electrical power supply to the microwave low noise amplifier and the microwave power amplifier in response to operation of the user VSAT interface (col 4, lines 20-25 and col 4, lines 60-63).

Regarding claim 5, Soleimani et al teaches a VSAT terminal according to claim 1, wherein Soleimani et al also discloses that the controller is functional to the user VSAT interface's operation by dispensing max electrical power supply to the low noise amplifier and the power amplifier (col 3, lines 57-col 4 line 4). However, Soleimani et al didn't specifically teach that in the absence of a communication period or while in standby mode, the receiver is still turned on, wherein the controller provides a less-than full power supply to the microwave power amplifier when there is no communication. Dent et al stated that it is well known in the art that only the receiver is operating when the transmitter is off during the time between conversations or between any interaction of the user interface or the receiver, the receiver is consuming power (col 3, lines

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12-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al to Soleimani et al in order to particularly save power on one unit while the other is left on to wait for or receive periodic incoming signals.

Regarding claim 6, Soleimani et al discloses a VSAT terminal according to claim 1, wherein the controller is responsive to receipt of an incoming transmission via the microwave low noise amplifier for dispensing a maximum electrical power supply to the low noise amplifier and the power amplifier, since Soleimani stated that the receiver chain comprising the low noise amplifier (col 6, lines 57-60) receives communication signals at regular predefined intervals in synchronization with the transmission from the central hub station (col 5, lines 25- 30). However, Soleimani et al didn't specifically teach that in the absence of a communication period or while in standby mode, the receiver is still turned on, wherein the controller supplies a low power supply to the microwave power amplifier and a full power supply to the microwave low noise amplifier in the absence of a communication period. Dent et al stated that it is well known in the art that only the receiver is operating when the transmitter is off during the time between conversations or any interaction of the transmitter or receiver, the receiver is consuming power (col 3, lines 12-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al to Soleimani et al in order to particularly save power on one unit while the other is left on to wait for or receive periodic incoming signals.

3. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soleimani in view of Walls (US 5,898,401)..

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Regarding claim 17, Soleimani et al discloses a VSAT terminal comprising an antenna 12 (see Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the power amplifier to the antenna; a receiver 80 coupled via the microwave low noise amplifier to the antenna; a user VSAT interface 16; and a controller 45 in communication with the user VSAT interface and in electrical connection with the microwave power amplifier and the microwave low noise amplifier for supplying power thereto, the controller being operative to provide a full electrical power supply to either of the amplifiers in the presence of a communication session (col 4, lines 25-35). Soleimani didn't disclose the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the microwave low noise amplifier. However, Walls discloses the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the low noise amplifier (col 5, lines 17-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of ^{Walls} ~~Dent~~ et al to Soleimani et al in order to be able to save power either to the whole terminal or a component of the receiver chain as in the LNA here when there's no activity.

Regarding claim 18, Soleimani et al also reveals a VSAT telecommunication network 10 (Fig 1) comprising at least one satellite 4, and a plurality of VSAT terminals 6 talking with the communication satellite, wherein at least one of the VSAT terminals comprises an antenna 12 (see

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Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the power amplifier to the antenna; a receiver 80 coupled via the microwave low noise amplifier to the antenna; a user VSAT interface 16; and a controller 45 in communication with the user VSAT interface and in electrical connection with the microwave power amplifier and the microwave low noise amplifier for supplying power thereto, the controller being functional to dispense a full electrical power supply to either of the amplifiers in the presence of a communication period (col 4, lines 25-35). Soleimani didn't disclose the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the microwave low noise amplifier. However, Walls discloses the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of low noise amplifier (col 5, lines 17-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of ~~Dent~~^{Walls} et al to Soleimani et al in order to save power either to the whole terminal or a component of the receiver chain as in the LNA here when there's no activity.

Regarding claim 19, Soleimani et al presents a method for managing power consumption in a VSAT terminal having an antenna 12 (see Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the microwave power amplifier to the antenna; a receiver 80 coupled via the microwave low noise amplifier to the antenna; a user VSAT interface 16; and a controller 45 in communication with the

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user VSAT interface, the microwave power amplifier, and the low noise amplifier, the method comprising of dispensing a full electrical power supply to either of the amplifiers in the presence of a communication period (col 4, lines 25-35). Soleimani didn't disclose the controller being functional to provide a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the microwave low noise amplifier. However, Walls discloses the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the low noise amplifier (col 5, lines 17-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of ^{Walls} ~~Dent~~ et al to Soleimani et al in order to save power either to the whole terminal or a component of the receiver chain as in the LNA here when there's no activity.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Fang (US 5,481,561), Fully Meshed CDMA Network for Personal Communications Terminals.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 305-9501 (for formal communications intended for entry)

or:

(703) 305-9508 (for informal or draft communications, please label

“PROPOSED” or “DRAFT”

Hand-delivered responses should be brought to the Crystal Park II, 2021 Crystal Drive, Arlington VA, Sixth Floor (Receptionist).

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Any inquiry concerning this communication or communications from the examiner should be directed to Lana Le whose telephone number is (703) 308-5836 and to the supervisory patent examiner Daniel Hunter whose telephone number is (703) 308-6732.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

With Regards,

Lana Le

February 23, 2001


DANIEL HUNTER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600